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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,410	11/19/2003	Anthony Downing	920537-95124	9993

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BARNES & THORNBURG LLP  
P.O. BOX 2786  
CHICAGO, IL 60690-2786

EXAMINER
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HAILE, FEBEN

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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10/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/718,410	Applicant(s) DOWNING ET AL.	
	Examiner Feben M. Haile	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,12-17,19,21-26 and 28 is/are rejected.
- 7) ☒ Claim(s) 2,9,11,18,20 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: on page 1 line 12 and page 2 line 14, the word "dialled" should be replaced with the word -dialed-. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-8, 10, 12-17, 19, 21-26, and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art, (see background of the invention, pages 1-3), hereinafter referred to as AAPA.

**Regarding claims 1, 10, 19, and 28**, AAPA discloses (i) writing a block of data to an area of a buffer as a plurality of rows (**page 2 line 30-page 3 line 5; a block of CAS data is written to a first buffer in series**), each row comprising a predetermined number of timeslots of data (**page 1 line 34-page 2 line 4; in the E1 standard, a timeslot of a CAS block for each trunk is received every 125  $\mu$ s, a CAS block equals 32 rows of data that corresponds to 32 communication channels of each trunk, thus each row contains a timeslot for a communication channel of each trunk**); (ii) writing a next block of data to an area of the circular memory buffer located sequentially after the area occupied by the previous block of data as a plurality of rows (**page 2 line 30-page 3 line 5; a block of CAS data is written to a second buffer in series**), each row comprising a predetermined number of timeslots of data, wherein after writing each row of said next block of data (**page 1 line 34-page 2 line 4; in the E1 standard, a timeslot of a CAS block for each trunk is received every 125  $\mu$ s, a CAS block equals 32 rows of data that corresponds to 32 communication channels of each trunk, thus each row contains a timeslot for a communication channel of each trunk**), changes in the data contained in the row are determined by comparing the row with the corresponding row in the previous block of data (**page 3 lines 7-13; once a complete block of data has been written to one of the buffers, changes in the block of data are compared to a previous block of data**); and (iii) repeating step (ii) a plurality of times (**page 3 lines 24-25; this method is continued in a loop for as long as data is being received and monitored**).

AAPA discloses the claimed invention except for the buffer being a circular memory. It would have been obvious to one having ordinary skill in the art at the time the invention was made that to use a circular type of memory is a manner of design choice. An advantage of using such a buffer being to bridge the constant sample data rate of input and output with a DSP processor, which is commonly programmed to process entire blocks of data at one time.

**Regarding claims 3, 12 and 21**, AAPA discloses wherein data is written to the circular memory buffer by direct memory access (DMA) **(page 2 lines 30-31; the blocks of data are written to the first and second buffers by a DMA).**

**Regarding claims 4, 13, and 22**, AAPA discloses wherein, in step (ii), after writing each row of the block of data, an interrupt is generated, and wherein changes in the data contained in the row are determined in response to the interrupt **(page 3 lines 7-13; once a complete block of data has been written to one of the first or second buffers, changes in the block of data is compared to a previous block of data).**

**Regarding claims 5, 14, and 23**, AAPA discloses wherein a row of data is written to the circular memory buffer every 125  $\mu$ s **(page 1 line 34-page 2 line 1; In the E1 standard, a time slot of CAS data is received every 125  $\mu$ s, thus its obvious to one of ordinary skill in the art that the data would be written into the buffer at the same rate).**

**Regarding claims 6, 15, and 24**, AAPA discloses wherein all blocks of data are alternately written to one of two areas of the circular memory buffer **(page 3 lines 1-2;**

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**alternate blocks of data are written to each of the first and second buffers so that only one buffer is written at any one time).**

**Regarding claims 7, 16, and 25**, AAPA discloses the claimed invention except wherein the size of each areas of the circular memory buffer is equal to the size of a block of data. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made that a CAS block equals 24 or 32 rows of data, depending on E1 or T1 standards, thus the size of the buffer would at least have to be large enough to write that amount of data.

**Regarding claims 8, 17, and 26**, AAPA discloses wherein the locations of the two areas of the circular memory buffer are consecutive (**page 2 line 30-page 3 line 5; blocks of CAS data are written to first and second buffers alternately in series; thus it would have been obvious to one having ordinary skill in the art that the two buffers are successive**).

#### ***Allowable Subject Matter***

4. Claims 2, 9, 11, 18, 20, and 27 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

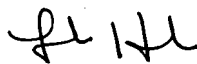
a) Lee (US 6,928,083), CAS Data Processing Apparatus of STM-1 Interface Block


**b) Sproat et al. (US 6,778,503), Automated Line Signal Processing**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Feben M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 6:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
09/29/2007

  
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SUPERVISORY PATENT EXAMINER  
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